

REMARKS

Claims 1 - 20 remain active in this application. No amendments to the application are currently presented and no new matter has been introduced into the application.

Claims 1 - 7, 9, 10, 12, 15, 18 and 20 have been rejected under 35 U.S.C. §103 as being unpatentable over Setlack et al. '526 in view of Setlack et al. '804 and claims 8, 11, 13, 14, 16, 17 and 19 have been rejected under 35 U.S.C. §103 as being unpatentable over Setlack et al. '526 in view of Fujiwara et al. Both of these grounds of rejection are respectfully traversed for the reasons of record and the further remarks provided below.

The present invention is directed to the removal of static electrical charge from the finger of a user prior to the user placing a finger on a fingerprint reading apparatus which is intended to identify a user and which can be damaged by such static electricity if not discharged prior to the contact of the finger of the user with the fingerprint reading apparatus. Numerous methods and devices are known to perform such a function and the Setlack et al. references are exemplary thereof.

The passage of column 6 of Setlack et al. '804 on which the Examiner heavily relies also appears verbatim at column 6, lines 32 - 47, of Setlack et al. '524. The following paragraph (column 6, lines 48 - 53, of Setlack et al. '524 and column 6, lines 38 - 50, of Setlack et al. '804) and Figure 4 also appear to be identical in both documents. Therefore, references simply to "Setlack et al." herein should be considered as a reference to either or both references. This passage of Setlack et al. discusses a second external electrode 53 used to bleed charge from the finger of a user through resistor 104 to ground. (Resistor 104 is

necessary in Setlack et al. since it is used to develop a signal to initiate a "wake-up" procedure performed by wake-up/protect controller 102 even though use of resistor 104 necessarily increases the time required to "bleed" charge away from the user's finger, particularly as compared to the instantaneous discharge if a discharge electrode is connected directly to ground. This increase in time required for completion of discharge is accommodated in Setlack et al. by providing delay in the wake-up procedure before providing power to the active circuit portions (see, for example, column 6, line 52 of Setlack et al. '524).) The passage of Setlack et al. relied on by the Examiner also teaches a movable (e.g. slidable or pivotable) electrically conductive cover 53' as an alternative (see, for example, "alternately" at column 6, line 40, of Setlack et al. '524) second electrode.

It should be recognized, as alluded to above, that the reliability of rapid discharge of static electricity can be affected by electrical resistance which may be present at the interface between the skin of the user's finger and the discharge electrode in much the same way that discharge time may be extended by the use of resistor 104. That is, rapid discharge can only be assured if the user's finger firmly contacts the discharge electrode. Further, electrical resistance which would increase discharge time may occur or vary unpredictably in any mechanical joint such as a hinge or sliding mechanism for a cover.

The invention addresses these potential sources of resistance and resultant lack of reliability of rapid discharge by providing *both* a movable cover and a fixed discharge electrode plate adjacent the fingerprint reader and the cover thereof. The cover and the fixed plate cooperate with each other by being arranged such that the natural movement of a user to open the cover will involve touching the plate with a wiping motion or

by reaction against the cover (e.g. in the manner of a lever), either of which substantially assures a low resistance contact between the user's finger and the discharge electrode or plate, before the fingerprint reader can be touched. At the same time, the effect of any resistance which may occur in the mechanical joint by which the cover is made movable is avoided.

Further, if the cover is conductive, redundant parallel discharge paths are provided which provides reduced resistance and/or increased reliability of rapid discharge. While Setlack et al. may disclose use of either a fixed electrode 53 or a conductive cover, it does not teach or suggest use of *both* a cover and a fixed discharge electrode or, more importantly, any possible beneficial cooperation between them to improve the reliability of discharge, much less *rapid* discharge which Setlack et al. does not provide and may require a complex delay arrangement to accommodate.

The structure which supports this feature and meritorious effect of the invention is explicitly recited in independent claims 1, 7, 10, 13 and 16 as follows (emphasis added):

claim 1:

"removing said static electricity...through a plate on said fingerprint-reading apparatus adjacent said fingerprint-reading portion prior to putting his finger on a fingerprint-reading portion while obtaining access to said fingerprint-reading portion by movement of a structure for covering said fingerprint-reading portion..."

claim 7:

"a plate electrically connected with a ground and positioned adjacent said cover such that said plate is touched by said finger prior to said finger touching said fingerprint-reading portion as said cover is opened"

claim 10:

"a cover which closes said fingerprint-reading portion, and

"a plate on which said finger is put to open said cover,

"wherein said plate is formed of conductive material and connected with a ground"

claim 13:

"a cover which closes said fingerprint-reading portion when said fingerprint-reading portion is not used, and is opened by said finger when said finger is put on said fingerprint-reading portion, and

"a plate adjacent said cover,

"wherein said cover and said plate are formed of conductive material and connected with a ground"

claim 16:

"a cover which closes said fingerprint-reading portion, and

"a plate on which said finger is put to open said cover,

"wherein said plate is formed of conductive material and connected with a ground".

Thus, the Setlack et al. reference do not teach or suggest the claimed combination of elements or their cooperation. Fujiwara et al. is cited only for teaching the use of conductive resin as a conductive material at column 11, lines 20 - 26, (which while mentioning an acrylic resin, contains no mention of that material being conductive) and does not mitigate the deficiencies of the Setlack et al. references in regard to the combination and cooperation of a cover and a plate and the Examiner has not asserted that it does. Moreover, the statements of the current

rejections does not refer to the claimed combination of elements or their cooperation. Further, as discussed above, the Setlack et al. reference does not teach or suggest connecting discharge electrode 53 or cover 53' to ground and any proposed modification to do so would be improper under the precedent of *In re Gordon*, 221 USPQ 1125 (Fed Circ., 1984) since connection of the discharge electrode to ground would preclude development of a signal to initiate operation of wake-up protect controller 102 and operation of Setlack et al. in the manner intended. Thus, the Examiner has failed to make and cannot make a *prima facie* demonstration of obviousness of any of claims 1 - 4 or 7 - 18.

Claims 5 and 19 and claims 6 and 20, respectively depending therefrom, are distinguished from the Setlack et al. reference and Fujiwara et al. in much the same manner but are directed to a device configuration including an outer case as a cover for the overall apparatus and the fingerprint reading portion, in turn. Neither the Setlack et al references nor Fujiwara et al. teach or suggest such a configuration as is recited in claims 5 or 19 or the explicit recitation of connection of a conductive device (claim 5) or a conductive lock-releasing button (claim 19) to ground. Therefore, the Examiner has failed to make a *prima facie* demonstration of obviousness of any of claims 5, 6, 19 and 20, as well.

Accordingly, it is again respectfully submitted that the current grounds of rejection are clearly in error and ignore the fact that the claims recite a combination of particular elements and a particular cooperation thereof which supports unexpectedly increased reliability of performance of a static electricity discharging function as well as improving protection for the fingerprint reading portion with a simplified arrangement which does not require complex

delays and the like which may be required by Setlack et al. which, in this regard, teaches away from the claimed invention and does not lead to an expectation of production of improved operation with simplified structure as provided by the invention as claimed. Accordingly, it is respectfully requested that the current grounds of rejection be reconsidered and withdrawn.

Since all rejections, objections and requirements contained in the outstanding official action have been fully answered and shown to be in error and/or inapplicable to the present claims, it is respectfully submitted that reconsideration is now in order under the provisions of 37 C.F.R. §1.111(b) and such reconsideration is respectfully requested. Upon reconsideration, it is also respectfully submitted that this application is in condition for allowance and such action is therefore respectfully requested.

If an extension of time is required for this response to be considered as being timely filed, a conditional petition is hereby made for such extension of time. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041.

Respectfully submitted,



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